

## Suicide Among Patients in the Veterans Affairs Health System: Rural-Urban Differences in Rates, Risks, and Methods

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### RESEARCH HIGHLIGHTS:

- Researchers examined differences in methods and rates of suicide in veterans seeking VA treatment in rural and urban areas from 2004-2005 and 2007-2008. Compared to urban patients, rural VA patients were less likely than urban patients to have had a major mental illness diagnosis, like schizophrenia, and more likely to have had suffered from depression, post-traumatic stress disorder (PTSD) or received an anxiety disorder diagnosis.
- Suicide rates were higher in rural areas in both time periods, with a rural suicide rate of 38.76 per 100,000 compared to 31.45 per 100,000 for urban areas from 2004-2005. Veterans in rural areas were also more likely to use firearms to attempt or complete suicide, at 77%, compared to 61% for urban areas.
- Although healthcare accessibility was not found to be tied to risk for suicide, clinicians and counselors providing services to VA patients in rural areas may need to address cultural factors in those patients who pose a suicide risk.

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### ABSTRACT:

“Objectives: Using national patient cohorts, we assessed rural – urban differences in suicide rates, risks, and methods in veterans.

Methods: We identified all Department of Veterans Affairs (VA) patients in fiscal years 2003 to 2004 (FY03-04) alive at the start of FY04 (n = 5,447,257) and all patients in FY06-07 alive at the start of FY07 (n = 5,709,077). Mortality (FY04-05 and FY07-08) was assessed from National Death Index searches. Census criteria defined rurality. We used proportional hazards regressions to calculate rural – urban differences in risks, controlling for age, gender, psychiatric diagnoses, VA mental health services accessibility, and regional administrative network. Suicide method was categorized as firearms, poisoning, strangulation, or other.

Results: Rural patients had higher suicide rates (38.8 vs 31.4/100,000 person- years in FY04-05; 39.6 vs 32.4/100,000 in FY07-08). Rural residence was associated with greater suicide risks (20% greater, FY04-05; 22% greater, FY07-08). Firearm deaths were more common in rural suicides (76.8% vs 61.5% in FY07-08).

Conclusions: Rural residence is a suicide risk factor, even after controlling for mental health accessibility. Public health and health system suicide prevention should address risks in rural areas.”

## Implications

### FOR PRACTICE

Although only 21% of adults in the general population live in rural areas, approximately 35% of VA patients lived in rural areas during 2004-2005 and 2007-2008. Practitioners and clinicians providing services and treatment to veterans in rural areas should be aware of the elevated risk for suicide in this population, compared to that of urban veterans, and should focus on cultural, social, and economic factors that may impact treatment. Researchers also observed a greater likelihood for VA patients in rural areas to commit suicide with firearms, so it would be beneficial for counselors to provide veterans' families with education and counseling about the danger of keeping firearms in the house where a veteran is struggling with mental health issues. While distance to a service provider was not associated with greater risk of suicide for veterans in rural areas, community members and advocates should still implement and improve programs that provide veterans with additional social and psychological support, such as 24-hour crisis lines and emergency responders. Family members of veterans who live in rural areas should be aware of risk factors and warning signs and should work to provide a supportive environment.

### FOR POLICY

Policy makers should continue to fund and strengthen programs focused on suicide-prevention, education and psychological support for veterans, especially those living in rural areas. VA officials and policy makers can work together to strengthen VA outreach initiatives in rural areas, increase integrated care services and increase access to emergency care services. Outreach and educational services may need more funding in rural areas, which can be addressed through a renewed focus on suicide education and treatment. Since cultural or social factors may influence suicide risk for VA patients in rural areas, programs focusing on changing public perception of mental illness and treatment should be a priority. Overall, programs addressing and promoting the importance and need for acceptance in treatment for patients at risk for suicide in rural areas would be greatly beneficial for rural veterans and their families.

### FOR FUTURE RESEARCH

Since elevated suicide risk in rural VA populations has been linked to social and cultural contexts, researchers should further explore the impact of social context on suicide rates. Determining the impact of cultural beliefs and socioeconomic status, among other social environmental factors, can lead to the development of interventions aimed at reducing suicide risk in rural areas. Future research can also assess the relationship between suicide risk for rural veterans and other factors including patient income, race, ethnicity and marital status. Researchers should also evaluate the efficacy of existing outreach programs aimed at suicide prevention for veterans living in rural areas. Finally, although many veterans receive treatment from the VA, researchers should examine veterans who receive care at non-VA centers and clinics to determine whether these populations have similar levels of risk and treatment needs.

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